

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
NORTHERN DIVISION

RANDY GUINN,

Plaintiff,

v

Case No. 17-11436

Honorable Thomas L. Ludington

PRAXAIR, INC., FIBA TECHNOLOGIES,
INC., FIKE CORPORATION

Defendants.

**OPINION AND ORDER GRANTING IN PART MOTION FOR RECONSIDERATION,
DIRECTING THE FILING OF SECOND AMENDED COMPLAINT, DENYING
MOTIONS CHALLENGING EXPERT WITNESSES, GRANTING FIKE’S MOTION
FOR SUMMARY JUDGMENT, STRIKING PRAXAIR AND FIBA’S NOTICES OF
NON-PARTY AT FAULT, DENYING PRAXAIR’S MOTION FOR SUMMARY
JUDGMENT, DENYING FIBA’S MOTION FOR SUMMARY JUDGMENT AND
AMENDING SCHEDUING ORDER**

On May 4, 2017, Plaintiff filed a complaint against Praxair, Inc. (“Praxair”) and Fiba Technologies, Inc. (“Fiba”) for injuries sustained from an explosion involving a hydrogen trailer (the “Trailer”). Compl., ECF No. 1. On December 19, 2017, Plaintiff filed an amended complaint adding Defendants Fike Corporation (“Fike”) and Chart Industries (“Chart”).¹ Am. Compl., ECF No. 27.

This opinion and order addresses the following five pending motions. On December 3, 2018, Fike filed a motion for summary judgment. ECF No. 80. The next week, Plaintiff filed a motion to amend his complaint a second time. ECF No. 84. On January 25, 2019, Plaintiff’s motion to amend his complaint was denied. ECF No. 97. Plaintiff filed a motion to reconsider the Court’s order denying his motion to amend, which will be addressed by this opinion.

¹ On January 30, 2019, the Parties stipulated to dismiss Chart from the case. ECF No. 103.

On January 25, 2019, Praxair filed a motion to exclude the testimony of Plaintiff's two experts, Thomas G. Witte and Michael D. Klein. ECF No. 100. Praxair contends that Witte's calculations of the Trailer's vacuum are scientifically unsound and incorrect. Praxair also contends that Plaintiff cannot call Witte as a witness because his conclusion that the Trailer's pressure rose to an unsafe level contradicts Plaintiff's testimony to the contrary. Finally, Praxair argues that Klein's testimony should be excluded because he failed, in assessing causation, to analyze and exclude alternative ignition sources for the explosion. A few days later, Fiba filed a motion to exclude Klein's testimony. ECF No. 101. Like Praxair, Fiba argues that Klein failed to assess alternative ignition sources. Fiba also contends that Klein's determination that the Trailer's vent stack rain flap did not fully open is not supported by the evidence. The next week, Fiba filed a notice of concurrence with Praxair's motion. ECF No. 111.² On February 4, Praxair and Fiba filed separate motions for summary judgment. ECF No. 106, 108.

Following a brief explanation about hydrogen and its transportation and a brief recitation of the relevant facts, each of the motions will be addressed in turn.

I.

A.

The following information involving the transportation and delivery of hydrogen was obtained from depositions and the various expert reports and appears largely uncontested.

Hydrogen is typically transported in its liquid form. However, liquid hydrogen transforms from a liquid to a gas at a very low temperature, -423 degrees Fahrenheit. It is the lightest known gas and is 7/100ths as heavy as air. Accordingly, it is imperative that the liquid hydrogen remain

² On February 11, 2019, Fike filed a motion for leave to file a delayed motion to challenge Fiba's expert, Randolph Harris. ECF No. 113. The next day, Praxair filed a similar motion seeking leave to file a delayed motion challenging Harris. ECF No. 114. Both of these motions were denied. ECF No. 118.

at a low temperature within the trailer during transportation. As the temperature within the trailer rises, the liquid hydrogen will begin converting to a gas. Because hydrogen gas occupies more space than liquid hydrogen, the pressure within the trailer will increase.

The trailer is designed to keep the hydrogen at a low temperature. To accomplish this, the trailer has an inner and an outer container. The inner container contains the hydrogen and the outer container holds the inner container. Between the two is an empty space maintained in a vacuum, helping sustain a low temperature within the inner container. Despite the vacuum, the inner container's temperature will inevitably rise. The design of the trailer cannot prevent this, only slow the progression. However, the quality of the vacuum will affect how quickly the temperature rises. The better the vacuum, the slower the rise in temperature. The poorer the vacuum, the quicker the rise in temperature.

The effectiveness of a vacuum is measured in microns which can be measured in one of two ways: cold microns and warm microns. A cold micron reading is measured while the trailer holds hydrogen. A warm micron reading is measured while the trailer is empty. The maximum safe micron level differs between cold microns and warm microns. The higher the micron reading, the higher the vacuum temperature. The lower the micron reading, the lower the vacuum temperature. A low micron reading is indicative of an effective vacuum. When a vacuum temperature rises to a certain micron level, it is deemed unsafe.

While liquid hydrogen is being transported, it can only be held in the trailer for a certain amount of time because its temperature will increase and become a gas. This will cause the pressure within the trailer to increase. Eventually, the pressure will reach a level that the trailer can no longer contain the hydrogen gas. At this point, the gas must be permitted to escape or the trailer may explode.

To facilitate a controlled release of hydrogen, the trailer is equipped with three safety release mechanisms. The first is the back pressure regulators which provide the smallest amount of pressure release at 135 psig. If the pressure increases beyond the capability of the back pressure regulators, then the spring loaded safety relief valves will activate. The spring loaded safety relief valves provide a medium amount of pressure release at 150 psig. And finally, if the pressure increases beyond the capability of the spring loaded safety relief valves, the rupture discs will activate. As the name implies, the discs will rupture and release a high amount of pressure at 219 psig.

All three of these safety relief mechanisms channel into the trailer's vent stack which releases the hydrogen gas into the air outside the trailer. The release of hydrogen gas can be dangerous because hydrogen has a broad flammability range and requires only a low level of energy to ignite. 0.02 millijoules of energy can ignite hydrogen which is less than seven percent of the energy needed to ignite natural gas. Hydrogen can ignite from the slightest source, such as static electricity or friction. For this reason, it is imperative that the vent stack and the trailer itself be constructed of material and in a manner that eliminates any such ignition source from being present.

The trailer has a pressure gauge that the driver can view from their seat. Praxair instructs its drivers to monitor the pressure level within the trailer. If the pressure rises more than 0.2 psig over two hours, drivers must stop, find a safe location, and vent the trailer.

Upon arriving at their destination, drivers must attach a hose from the trailer to the receiving hydrogen tank. The driver activates a switch on the tank and it automatically lowers the tank pressure to 135 pounds. The driver then must manually lower the tank pressure to 120 pounds and increase the trailer pressure to 135 pounds. It is dangerous for the trailer to exceed 135 pounds

of pressure because the trailer's maximum pressure is 150 pounds. The difference in pressure between the trailer and the tank forces the hydrogen to flow from the trailer into the tank. It is important that the difference in pressure be great enough that the hydrogen is forced to flow between the two. Otherwise, the hydrogen will not flow into the tank and the pressure within the trailer will continue to build. The optimal difference in pressure is 15 pounds.

B.

The incident at issue occurred on December 22, 2014. Plaintiff was scheduled to deliver hydrogen from East Chicago, Indiana to Hemlock Semiconductor in Hemlock, Michigan. Pl.'s Dep. at 39, ECF No. 55-1. The trailer used to deliver the hydrogen was Trailer 4855 ("Trailer"). Am. Compl. at 3, ECF No. 27.

Prior to making the delivery, Plaintiff inspected the Trailer. ECF No. 55-1 at 36. This included examining the Trailer's valves, meters, hoses, and vent knobs. *Id.* Plaintiff also checked to ensure that the Trailer's pressure was below 12 psig. ECF No. 100-9 at 22. Upon arriving at Hemlock Semiconductor, Plaintiff parked the Trailer at one of eight hydrogen tanks. ECF No. 55-1 at 30. He chock blocked the Trailer's tires, lowered the Trailer's airbag, grounded the Trailer, and connected a copper grounding wire to the Trailer. *Id.* at 49–50. Plaintiff then lowered the pressure in the receiving tank and elevated the pressure in the Trailer. *Id.* at 53. Hydrogen began pumping from the Trailer into the tank. *Id.* at 56. At some point, Plaintiff recalls the pressure in the Trailer quickly rising to 140 psig. ECF No. 80-5 at 58. Hydrogen then explosively escaped the Trailer and injured Plaintiff. ECF No. 27 at 5.

C.

Following the incident, Praxair (the owner of the Trailer) developed a Root Cause Analysis ("RCA") of the accident on March 31, 2015. Rathgeber Dep. at 136, ECF No. 63-4. The focus of

an RCA is first to determine what the employee's injury is and then to determine how the injury occurred. *Id.* at 24–25. Praxair's Director of Safety for U.S. Industrial Gasses, Dan Rathgeber, was deposed on May 4, 2018 regarding the RCA. Rathgeber explained that during the RCA, Trailer 4855 was inspected "top to bottom" and no problems were found. *Id.* at 129. He did identify two causes of Mr. Guinn's injury. He stated:

[T]here were two causes. When we say "caused the incident," we need to be talking about the focal point here, and we were looking at the injury to Mr. Guinn, so Mr. Guinn's really lack of operational discipline, not lowering the tank pressure to what the procedures and the requirements were caused the incident. And then him also going to the back of the trailer without his required PPE caused the injury to his – to his head."³

ECF No. 63-4 at 130–131.

Rathgeber explained the first cause of the accident as follows:

Mr. Guinn failed to reduce the pressure in the tank to below or at 120 psig based on the data that we have...So when you're delivering liquid hydrogen, one of the first things you do is you start building pressure in the trailer. So Mr. Guinn would be basically taking liquid hydrogen, putting it through an atmospheric vaporizer, kind of like a fin coil where it's absorbing heat. And when any kind of a cryogenic material absorbs heat, it expands and it produces pressure. So he's building the pressure up in his trailer from, roughly, 18 to 50 pounds to his delivery pressure which is going to be below 135 pounds because 135 is the max pressure he should allow that trailer to get to.

Now, unfortunately what Mr. Guinn did, he was supposed to – we always want to have a 15 pound DP, differential pressure, between the trailer and the tank you're delivering to. So Mr. Guinn tried to put – tried to get the trailer – you know, tried to deliver to a tank that was 130 pounds, with a five pound DP, so the liquid has nowhere to go at that point so it's expanding. He's trying to control pressure, but it has nowhere to go because he hasn't lowered the pressure.

Id. at 44–45.

As part of his report, Rathgeber had prepared a diagram which he referenced during his deposition.

³ Mr. Rathgeber went on to explain that the term "PPE" refers to protective equipment that Plaintiff should have been wearing. ECF No. 63-4 at 130.

This diagram reflects the pressure and level of that tank during the time of the delivery.

Now, as you can see, this is the delivery that Mr. Guinn made; and the pressure right here never gets below 120. And you can see a small blip in the level, and some of that could be done to the pressure. But you can see over here, a normal delivery where the driver takes it below 120, you can see a linear increase, and so that product now has a place to go and starts increasing the level, and you don't see that over here with Mr. Guinn...

And so what I'm saying is that if Mr. Guinn had followed the procedure like he was supposed to and reduce the tank down to 120 psig, the pressure that is built up in the trailer – and the other part of this cause is that Mr. Guinn has full control over many things. One is building the pressure in the trailer, the other is venting the pressure in the trailer as well so you're watching that pressure that's, you know, built into these procedures and what he's trained in to open the vents as the pressure gets higher to make sure that he has a place for that pressure to go as he's watching it.

Id. at 47–48.

Regarding the second cause of the accident, he stated

Yeah, so Mr. Guinn's procedures when we have a stack fire is to don his baklava on top of his -- and his hardhat on top of that and, you know, with all of his gloves and everything, go back to the trailer and switch the diverter valve, which, you know, he was somewhat attempting to do, it seems based on the Hemlock statements, but he was also not wearing his protective equipment.

Id. at 130–131.

D.

The case currently has three defendants: Praxair, Fiba, and Fike, but an unusual alignment of the financial interests of the parties. Praxair “produces, stores, and distributes industrial gases, such as oxygen and hydrogen.” ECF No. 27 at 3. It owns Trailer 4855. *Id.* Plaintiff is not an employee of Praxair, but of Ruan Transportation Management (“Ruan”). Ruan contracts with Praxair to provide drivers and, presumably, tractor trucks to transport the liquid hydrogen. Praxair's Mot. Partial Sum. J., ECF No. 55 at 2. As part of Ruan and Praxair's contract, Ruan agreed to indemnify Praxair against all claims and liabilities, except those arising from Praxair's sole negligence. As part of his employment duties for Ruan, Plaintiff transported and delivered

Praxair products to Praxair customers. ECF No. 27 at 3. Plaintiff had been working for Ruan for two and a half years when the incident occurred. ECF No. 55-1 at 17.

Fiba services gas containment equipment, including Praxair's trailers. ECF No. 27 at 4. Fiba typically conducts visual inspections of trailers once a year and a pressure test inspection once every five years.⁴ Clay Dep. at 15–16, ECF No. 106-14. Fiba had serviced the trailer in October 2014, just two months prior to the incident. *Id.* at 70. Fiba issued a Certificate of Compliance which provided

This is to Certify that FIBA Technologies, Inc. hereby confirms that the product being supplied conforms to the specifications set forth by Purchase Order Number: 60011861, and referenced to FIBA Work Order Number: OH16534...If the product is a trailer, FIBA also certifies that the equipment has been manufactured in accordance with all requirements of the U.S. Federal Motor Vehicle Safety Standards, at the time of manufacture.⁵

Fike manufactures burst or rupture discs for hydrogen trailers, including Trailer 4855. ECF No. 27 at 4. As discussed above, these discs are safety release devices.

E.

Approximately two and a half years after the incident, Plaintiff filed his initial complaint, claiming that the trailer's "safety relief system failed." Compl., ECF No. 1. He listed only two defendants, Praxair and Fiba. Plaintiff alleged that Praxair breached its duty of reasonable care in maintaining, testing, and inspecting the trailer. *Id.* at 4–5. He also claimed that Praxair was negligent by permitting use of the trailer and by "failing to warn Plaintiff of the signs of valve degradation and the consequences thereof." *Id.* at 4. Plaintiff further claimed that Fiba breached

⁴ The pressure test inspection determines whether the tanker has leak issues. Clay Dep. at 15–16, ECF No. 106-14.

⁵ Fiba provided the Certificate of Compliance to the Court and the Parties pursuant to settlement conference discussions and a Court order. ECF No. 41 ("[A]ll parties in attendance agreed that the following documents would be exchanged with copies being furnished to the Court: A copy of Fiba's most recent warranty certification to Praxair regarding Fiba's regular five-year maintenance of Trailer 4855.").

its duty of reasonable care by negligently testing and inspecting the trailer and failing to recommend its removal from service. *See id.* at 5–6.

In the fall of 2017, Praxair and Fiba filed separate Notices of Non-Party Fault. ECF No. 19, 20. Both identified five additional parties, including Fike, not identified in Plaintiff’s complaint and alleged that these parties were at fault for Plaintiff’s damages. On December 19, 2017, Plaintiff filed his first amended complaint which added Fike as a defendant to the action. ECF No. 27. Plaintiff alleged that Fike “negligently designed, tested, approved, manufactured, produced and/or recommended the burst or rupture discs used on the subject trailer.” *Id.* Neither Praxair nor Fiba filed crossclaims.

II.

Plaintiff’s motion for reconsideration of the Court’s order denying his motion to amend his complaint will be addressed first.

A.

Pursuant to Eastern District of Michigan Local Rule 7.1(h), a party may file a motion for reconsideration of a previous order, but must do so within fourteen days of the order’s entry. A motion for reconsideration will be granted if the moving party shows: “(1) a palpable defect, (2) the defect misled the court and the parties, and (3) that correcting the defect will result in a different disposition of the case.” *Michigan Dept. of Treasury v. Michalec*, 181 F. Supp. 2d 731, 733-34 (E.D. Mich. 2002) (quoting E.D. Mich. LR 7.1(g)(3)). A “palpable defect” is “obvious, clear, unmistakable, manifest, or plain.” *Id.* at 734 (citing *Marketing Displays, Inc. v. Traffix Devices, Inc.*, 971 F. Supp. 2d 262, 278 (E.D. Mich. 1997)). “[T]he Court will not grant motions for rehearing or reconsideration that merely present the same issues ruled upon by the Court, either

expressly or by reasonable implication.” E.D. Mich. L.R. 7.1(h)(3). *See also Bowens v. Terris*, No. 2:15-CV-10203, 2015 WL 3441531, at *1 (E.D. Mich. May 28, 2015).

Plaintiff’s motion for reconsideration will be granted in part.

B.

Plaintiff filed his initial complaint over two years ago on May 4, 2017. ECF No. 1. In it, he alleged that the Trailer’s “safety relief system failed” and listed only two defendants, Praxair and Fiba. *Id.* On September 15, 2017, Praxair filed its Notice of Non-Party Fault. ECF No. 19. Almost three months later, Plaintiff filed a motion to amend his complaint and the motion was granted. ECF No. 25, 26. The amended complaint added two new parties, Fike and Chart, but added no additional claims against Praxair or Fiba.⁶

On February 3, 2018, the scheduling order was amended at the request of the parties and the close of discovery was extended to October 19, 2018, providing the parties more than one year for discovery. ECF No. 42. On July 9, 2018, a second amendment to the scheduling order was submitted. ECF No. 51. It sought a further extension of the dates entered by the Court in part based upon the attorneys’ representations that they wanted to “focus on facilitation and to control litigation costs prior to facilitation.” *Id.* at 2. Accordingly, the close of discovery was extended to November 19, 2018.

Shortly thereafter, the Court case manager received a phone call from counsel for Praxair seeking a conference because the existing dates needed to be further extended, particularly with the need to prepare for facilitation. On August 7, 2018, a phone conference was held and additional

⁶ On January 30, 2019, the Parties stipulated to dismiss Chart from the case. ECF No. 103.

extensions were granted in consideration of the parties' request for leniency to accommodate facilitation. *See* ECF No. 53. The close of discovery was extended to December 3, 2018.⁷ *Id.*

On December 12, 2018, Plaintiff filed a motion to amend his complaint a second time. According to the Sixth Circuit, "[t]o deny a motion to amend, a court must find 'at least some significant showing of prejudice to the opponent.'" *Duggins v. Steak 'N Shake, Inc.*, 195 F.3d 828 (quoting *Moore v. City of Paducah*, 790 F.2d 557 (6th Cir. 1986)). Filing a motion after the close of discovery constitutes significant prejudice. *Id.* ("[A]llowing amendment after the close of discovery creates significant prejudice.").

Plaintiff sought to amend his complaint in the following three ways:

- (a) Amend Plaintiff's specific theories of liability to confirm [sic] with the discovery and expert opinions that [had] been developed throughout the case;
- (b) Amend the Complaint to replace Praxair, Inc. as a defendant with the now owner of Praxair, Inc., Linde, PLC;
- (c) Add a consortium claim for Plaintiff's wife Melissa Guinn.

Mot. Am. Compl. at 4, ECF No. 84. When he filed his motion, Plaintiff had filed his initial complaint over a year and half prior, discovery had closed, and Fike had already filed a motion for summary judgment.

The Court denied Plaintiff's motion because permitting the Second Amended Complaint would frustrate a timely resolution of Plaintiff's claim and prejudice Defendants. ECF No. 97. The deadline for discovery had been extended three separate times, and Plaintiff did not submit his

⁷ Throughout the course of this litigation, several different attorneys represented Plaintiff. The first complaint filed on May 4, 2017 listed Craig Hilborn and Kevin Riddle of Hilborn & Hilborn P.C. and Barry Conybeare of Conybeare Law Office, P.C. ECF No. 1. Six months later, Hilborn & Hilborn P.C. withdrew as counsel. ECF No. 22, 23. The next month, Debra Freid filed her appearance as co-counsel. ECF No. 24. On September 18, 2018, she withdrew. ECF No. 60. That same month, Thomas W. Waun and Vernon R. Johnson of Johnson Law, PLC appeared as co-counsel for Plaintiff. ECF No. 57, 59. Conybeare Law Office and Johnson Law are the two firms currently representing Plaintiff.

motion to further amend the complaint within the discovery deadline. The Court further held that Plaintiff's Second Amended Complaint was not permissible because it would transform the fundamental theories of liability in the case. Furthermore, Plaintiff's motion was lacking in analysis. *See id.* at 7 ("Plaintiff has not adequately addressed the substantive issues surrounding the substitution of Linde as a defendant and his request will be denied...Plaintiff seeks to add his wife, Melissa Guinn, as a plaintiff, contending that she 'obviously has sustained significant injuries in the case.' If this assertion is as obvious as Plaintiff contends, it is unclear why Plaintiff waited over a year and a half to attempt to add her as a plaintiff.")(citation omitted).

C.

Upon closer consideration, Plaintiff's motion to reconsider will be granted in part.

1.

Plaintiff's First Amended Complaint presents one count of negligence against Praxair. It provides:

As the owner of the subject trailer, Praxair, Inc. breached its duty of reasonable care owed to Plaintiff including, but not limited to:

- a. failing to maintain the subject trailer in a reasonably safe condition;
- b. negligently testing or failing to test the subject trailer;
- c. negligently inspecting or failing to inspect the subject trailer;
- d. negligently allowing the subject trailer to leave its place of business in an unsafe condition;
- e. failing to remove the subject trailer from use;
- f. failing to warn Plaintiff of the signs of valve degradation and the consequences thereof.

ECF No. 27 at 5–6. The claim provided few facts and no guidance as to the particulars of Plaintiff's claim. In a complaint, the pleader need not provide "detailed factual allegations", but the

“obligation to provide the ‘grounds’ of his ‘entitle[ment] to relief’ requires more than labels and conclusions, and a formulaic recitation of the elements of a cause of action will not do.” *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 555 (2007). The pleading “must contain sufficient factual matter, accepted as true, to state a claim to relief that is plausible on its face.” *Iqbal*, 556 U.S. at 678–79 (quotations and citation omitted).

Because Plaintiff presented only conclusory theories of breach, the complaint lacked sufficient factual information to support his legal claims or to apprise the Defendants of the case they were called upon to defend. There is no indication, for example, as to how Praxair acted negligently in its maintenance, testing, or inspection of the trailer. The lack of factual allegations not only limited the Defendants’ ability to understand Plaintiff’s claims against them, it also limited the Court’s ability to understand the claims.

Plaintiff’s Second Amended Complaint sought to clarify the allegations against Praxair as follows:

As the owner of the subject trailer, Praxair committed negligence as it breached its duty of reasonable care owed to Plaintiff including, but not limited to:

- a. In overfilling the trailer in violation of 49 CFR;
- b. In failing to monitor the tanker’s holding time as required by 49 CFR;
- c. In failing to investigate prior burst disc ruptures;
- d. In failing to investigate and repair historically bad vacuums in trailer 4855;
- e. In failing to take trailer 4855 out of service due to the history of poor vacuums and burst disc ruptures;
- f. In having pressure gauges on tank 4 at the Hemlock Tank Farm which were difficult to read;
- g. In having signage at the Hemlock Tank Farm at tank #4 which was inconsistent with driver delivery instructions;

- h. In operating the trailer with a vent stack rain flap which failed to fully open 90 degrees in violation of 49 CFR;
- i. In operating the subject trailer with lights on the back near the vent stack which were not designed to be explosion proof in a hydrogen environment;
- j. In failing to appropriately assess the risks of hydrogen contact with the liquid tank lighting and perform proper hazard analysis and properly apply the design-guard-warn hierarchy to trailer 4855;
- k. Failing to warn plaintiff and other drivers of trailer 4855 of the danger of operating the subject trailer while it was overfilled and failing to instruct plaintiff and other similarly situated drivers to open road relief valves to alleviate the overfilling of the trailer.

ECF No. 84-1 at 5–6.

Subparagraphs (a), (f), (g), and (k) however, fall beyond the purview of the scope of the First Amended Complaint. The First Amended Complaint makes no claims in relation to overfilling the Trailer as alleged in subparagraphs (a) and (k). Instead, the allegations all concern the Trailer and Praxair's maintenance of the Trailer. Subparagraphs (f) and (g) both relate to the signage at Hemlock. None of the allegations in the First Amended Complaint relate to signage.

The allegations within the First Amended Complaint are broad and contemplate multiple theories of liability. Subparagraphs (b), (c), (d), (e), (h), (i), and (j) of the Second Amended Complaint fall within the broad purview of the First Amended Complaint. They each relate to the Trailer itself and Praxair's maintenance of the Trailer. They do not expand upon the allegations of the First Amended Complaint, but instead make the claim more precise.

2.

Plaintiff's First Amended Complaint presents one count of negligence against Fiba. It provides:

Defendant Fiba Technologies, Inc. breached its duty of reasonable care owed to Plaintiff including, but not limited to:

- a. negligently testing or failing to test the subject trailer;
- b. negligently inspecting or failing to inspect the subject trailer;
- c. negligently allowing the subject trailer to leave its place of business in an unsafe condition;
- d. failing to properly repair the subject trailer;
- e. failing to recommend removal of the subject trailer from service;
- f. failing to warn Plaintiff of the signs of valve degradation and the consequences thereof.

ECF No. 27 at 7.

Plaintiff's Second Amended Complaint would clarify Plaintiff's allegations against Fiba.

It provides:

Defendant Fiba committed negligence as it breached its duty of reasonable care owed to Plaintiff including, but not limited to:

- a. negligently testing or failing to test the subject trailer to determine that it was maintaining an appropriate vacuum before it was returned to Defendant Praxair;
- b. negligently inspecting or failing to inspect the subject trailer to determine why the trailer was failing to maintain an appropriate vacuum before returning the trailer to Praxair;
- c. negligently allowing the subject trailer to leave its place of business in an unsafe condition;
- d. failing to properly repair the subject trailer insofar as the trailer was returned to Praxair in a condition it would not allow it to maintain an appropriate vacuum and in replacing the rain flap on the vent stack improperly insofar as it was not able to open to 90 degrees in violation of 49 CFR;
- e. failing to recommend removal of the subject trailer from service.

ECF No. 84-1 at 6–7. The allegations contained within the Second Amended Complaint fall within the purview of the First Amended Complaint. Though the Trailer's vacuum and rain flap are not specifically mentioned within the First Amended Complaint, both are components of the Trailer

which Fiba regularly inspected and repaired. Accordingly, both are implicated by the First Amended Complaint and permitting the components' inclusion in the complaint will not prejudice Defendants.

3.

Plaintiff's Second Amended Complaint would also modify his allegations against Fike. However, as will be discussed below, Fike's motion for summary judgment will be granted and Fike dismissed as a defendant. Accordingly, Plaintiff's motion for reconsideration of the Second Amended Complaint as to the allegations against Fike will be denied as moot.

In his motion for reconsideration, Plaintiff does not address the other two amendments he requested in his motion to file a Second Amended Complaint, namely replacing Praxair with Linde as a defendant and adding Plaintiff's wife, Melissa Guinn, as a plaintiff. Plaintiff only addressed these issues in a perfunctory fashion in his previous motion to amend. In his current motion for reconsideration, he makes no mention of them. Accordingly, Linde will not be substituted as a defendant and Melissa Guinn will not be added as a plaintiff.

Plaintiff's motion for reconsideration of the Court's order denying his motion to amend his complaint will be granted in part and denied in part.

III.

Praxair and Fiba's motions challenging Plaintiff's experts, Thomas G. Witte and Michael D. Klein, will be addressed next.

The scientific method is premised on the search for replicable, predictable results. *See generally Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 593 (1993). Before expert scientific evidence may be admitted under Federal Rule of Evidence 702, the trial court must make a "preliminary assessment of whether the reasoning or methodology underlying the testimony is

scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.” *Id.* at 592–93; *see* Fed. R. Evid. 104(a). The court should consider (1) whether the theory or technique used by the expert can be tested; (2) whether the theory or technique has been peer reviewed or published; (3) the known or potential rate of error involved; and (4) “general acceptance” of the theory or technique. *Daubert*, 509 U.S. at 593–594.

The court’s role is that of a gatekeeper to ensure that only reliable expert witnesses and findings are presented to the jury. The court is not a fact-finder, but the expert’s findings must still be “sufficiently tied to the facts of the case.” *Id.* at 591 (quoting *U.S. v. Downing*, 753 F.2d 1224, 1242 (3rd Cir. 1985)).

The expert opinions of both Witte and Klein will be summarized in turn along with the motions challenging them.

A.

Witte’s resume provides that he is currently employed as the President and CEO of Witte Engineered Gases. Witte CV/Resume, Ex. 1, ECF No. 116-1. He holds a bachelor’s degree in chemical engineering from Villanova University where he graduated first in his class. *Id.* He has expertise in system engineering and design for hydrogen, nitrogen, oxygen, argon, LNG, CO₂, and helium. His past experience includes work as an engineering manager, a manager of technical training, a field engineer, and a site manager for a specialty gas depot. *Id.*

Witte begins his report by explaining the properties of hydrogen and the type of hydrogen trailer involved in the incident. The trailer’s inner container holds the liquid hydrogen and is supported by “nonconductive supports within the outer container.” ECF No. 100-2 at 1. Between the inner container and the outer container is annular space with a vacuum design. “The vacuum is the most critical parameter to limit heat transfer into the inner container and its contents. If too

much heat enters the inner container, then the cryogenic liquid warms, expands and begins to boil.” *Id.* at 2. According to Witte, a super insulated tank, such as Trailer 4855, has a vacuum of 1-10 microns cold. *Id.*

A tank cannot be filled to capacity with liquid hydrogen. *Id.* Unoccupied space must exist because despite the vacuum insulation, the hydrogen’s heat will increase while the hydrogen is within the inner container. *Id.* (“[H]eat is always added to a cryogenic tank and cannot be stopped. The heat transfer can only be slowed down to meet delivery/fill times.”) To address this, tanks are equipped with relief devices. The three types of devices are “(1) back pressure regulators (smallest flow), (2) spring loaded safety relief valves (medium flow), and (3) rupture discs (highest flow).” *Id.* These relief devices all must tie into a vent stack, which provides a conduit for hydrogen to escape the tanker. Trailer 4855’s vent stack had a metal rain flap covering its opening to prevent rain from entering the stack.

Witte states that the Hemlock Semiconductor System (“HSC”) is one of the most complex liquid hydrogen systems he has ever seen in his career. One reason is that the HSC system operates above hydrogen’s critical pressure of 173.5 psig. *Id.* at 5. Also, drivers are required to raise the pressure in the trailers to 135 psig in order to pump the hydrogen into the tanker. This is only 15 psig below 150 psig, the level at which the trailer can no longer contain the pressurized hydrogen and must activate the pressure relief mechanisms. *Id.* Additionally, the driver must vent the tank down to 120 psig to reach an adequate pressure difference between the trailer and the tanker. However, the HSC signs warn drivers to not drop the pressure below 120 psig when filling the tanker. Witte represents that maintaining the pressure at an exact pressure of 120 psig can be difficult to do.

Witte then explains the process of pumping hydrogen from a trailer into a HSC tank. *Id.* at

6. The driver must:

1. Manually raise the trailer pressure to 135 psig by opening a valve on the trailer's pressure build system.
2. Activate a switch isolating the receiving tank from the other HSC tanks.
3. Manually reduce the tank pressure from 135 psig to 120 psig.
4. Purge the fill line
5. Begin the fill once the tank pressure reaches 120 psig
6. Monitor the pressure within the HSC tank and the Praxair trailer during the delivery. If the pressure in the tank becomes too high, the driver must open the manual vent valve on either the trailer or the tank.

Id.

Next, Witte describes the incident involving Guinn and Trailer 4855. *Id.* at 7. According to Witte, Praxair's fill matrix for determining the maximum amount of liquid hydrogen that the Trailer could hold violated federal law. "As a result, Praxair trailer 4855 was **overfilled** by 1208 lbs or ~2700 gals of liquid hydrogen." *Id.* at 9. (bold in original).⁸

Witte continues by describing Trailer 4855's history of vacuum problems. *Id.* at 11. Within less than a year, both the "inner vessel hydro port and the outer casing of the vessel" had internal and external cracks. From 1991 to 1992, the Trailer was taken out of use and serviced for vacuum issues which involved pumping the vacuum. *Id.* Witte explains that pumping the annular space from a vacuum throughout its life compromises its quality because it introduces "air, water, and other impurities into the annular space." *See id.*

⁸ In Rathgeber's deposition, he testified, "it's the driver's responsibility before he gets on the road to make sure that the pressure in his trailer is – meets the DOT requirements to get on the road." ECF No. 63-4 at 36.

Furthermore, from 1991-2014, there were thirty recorded incidents in which the vacuum reading exceed 50 microns, which Witte deems an “unacceptable vacuum reading[.]” *See id.* Of particular concern is that during the Trailer’s five-year inspection in 2014, the vacuum showed consistent vacuum issues, including a reading of almost 3000 microns, a repeated rise in the micron level during the course of the inspection, and difficulty “pulling the vacuum.” *Id.* at 13. Witte also represents that the FIBA representative deposed was unaware of the proper vacuum reading for super insulated trailers. “He testified below 800 microns warm and 100 microns cold are satisfactory readings. He is wrong by a significant factor. On a super insulated LHY trailer a maximum warm vacuum is 140 microns, and cold vacuum is under 10 microns. At 10 microns colds, there is a significant increase in heat transfer that must be monitored by pressure to assure the rupture discs and relief valves do not activate.” *Id.* at 13.

In addition to the Trailer’s vacuum, Witte opined on the condition of the Trailer’s rupture discs. *Id.* at 14. From 2004-2014, Praxair documented a total of thirty-one Trailer 4855 rupture disc failures. Its sister trailer, Trailer 4896 (also manufactured by LOX Corporation), had thirty-six rupture disc failures during that time. Rupture disc failures are rare, as demonstrated by the fact that in Praxair’s entire East Chicago fleet, only one other rupture disc failed during that same time period. However, Witte does not attribute the disc failures to Fike, the rupture disc manufacturer. Instead, he opines that “these rupture disc failures were highly likely caused by bad vacuums and overfilled trailers.” *Id.* at 14.

Witte concludes his report by summarizing the facts of the incident. *Id.* at 15. He explains that the Trailer was overfilled at the Praxair East Chicago plant and that by the time Plaintiff arrived at HSC, the liquid hydrogen had expanded to fully fill the trailer or close to it. Witte attributes this increase in pressure to the Trailer’s faulty vacuum. He continues by explaining that

due to the excess pressure, the safety valves were unable to release an adequate amount of pressure which caused the rupture discs to activate. The sudden drop in pressure after the rupture discs burst caused the liquid hydrogen to quickly boil off, contributing to the severity of the explosion. He also states that the rain flap on the vent stack malfunctioned by not rising to a vertical level which would have provided the hydrogen with an unobstructed exit from the vent stack. The burn marks on the Trailer indicate that the flap was at least partially obstructing the vent stack, directing the explosion in directions other than vertically. He briefly theorizes that “[t]he ignition could reasonably been [sic] caused by the lights in the area of the vent stack.” *Id.* at 16.

Witte then lists the failures of each Defendant that contributed to the explosion. He considered Praxair primarily responsible for the explosion because “it gave the driver trailer 4855 with a historically bad vacuum that was systematically and illegally overfilled with liquid hydrogen.” *Id.* at 17. He summarizes his prior findings, which included his assertions that Praxair: did not monitor the tank holding time; did not investigate previous rupture disc failures; did not address the Trailer’s historically bad vacuum; did not sufficiently train its drivers or Ruan drivers; the pressure gauges were difficult to read; the signage at HSC was inconsistent with driver delivery instructions; the vent stack did not open fully; the light on the back of the Trailer was not designed to be explosion proof; and Praxair did not require its drivers to wear full protective gear. *Id.*

Witte claims that Fiba was “partially responsible” for the explosion because it did not fix the historical vacuum problems even though it had inspected and serviced the trailer multiple times over a span of years. Witte posits that Fike was not responsible for the explosion because “the rupture discs it sold...appear to have worked as designed.” *Id.* at 17.⁹

⁹ Witte also apportioned fault to Chart Industries as the manufacturer of the Trailer. However, Chart Industries has been dismissed as a defendant so its potential fault will not be discussed.

Witte attempts to address Praxair's RCA finding that Plaintiff was responsible for the explosion "by failing to maintain an adequate pressure differential between the delivery tanker and the customer tanker." *Id.* He argues that this is wrong, without further explanation, because the "allegedly missing 10 psig differential was not a cause of the explosion." *Id.* He also argues that Plaintiff was not responsible for failing to wear personal protective equipment during the delivery because Praxair does not require drivers to wear fire proof face/head gear during a standard delivery, such as the one being performed by Plaintiff.

1.

In its motion challenging Witte's testimony, Praxair challenges Witte's conclusions on two bases. ECF No. 100 at 1. First, his calculations of the vacuum pressure are scientifically "wrong." Second, Plaintiff's testimony that Trailer 4855's pressure did not increase between Chicago and Hemlock bars Plaintiff from calling an expert to testify to the contrary. Witte's assertion that the vacuum pressure rose while Guinn was driving from Chicago to Hemlock is contradicted by Guinn, the party identifying Witte as an expert.

a.

Praxair challenges Witte's calculations of the trailer's vacuum pressure, arguing that he applied the improper reading methodology. In his report, Witte does not specify whether he is referring to microns warm or microns cold. It initially appears that he is using microns cold in his calculation because he begins this section of his report by stating that "the vacuum was well above the optimum specifications of 1 micron cold." ECF No. 116-1 at 10. He then goes on to explain that the temperature rose from 14 microns to ultimately 450 microns, but does not specify whether he is still using cold microns or warm microns. *Id.* Presumably he was referring to warm microns because the chart entitled "Recorded Vacuum Levels above 50 Microns in Trailer 4855" appears

to record the temperature in warm microns. *Id.* at 12. Not every reading specifies “warm microns,” but the reading on November 12, 2014 specifically provides “Vacuum of 60 microns (warm).” *Id.* (parenthesis present in original).

Praxair argues that Witte used warm micron readings in his calculations, but stated his conclusion in cold microns. *See* ECF No. 100 at 9. Witte conceded in his deposition that the calculations he used were warm microns. Witte Dep. at 66, Ex. 4, ECF No. 100-5. Praxair also argues that Clay Carpenter, a FIBA plant manager “testified that the trailer’s post-accident vacuum reading on March 12, 2015 was acceptable based on FIBA’s standard for *warm* vacuum readings.” ECF No. 100 at 10 (emphasis in original).¹⁰ This distinction is significant because the threshold for excess temperature is different depending on whether warm microns or cold microns is used. If Witte was referring to 200 warm microns, Trailer 4855’s temperature would be 60 warm microns in excess of the maximum safe level (140 microns warm). If Witte was referring to 200 cold microns, Trailer 4855’s temperature would be 190 cold microns in excess of the maximum safe amount (10 microns cold).

Additionally, there is disagreement between Witte and Praxair’s expert, David J. Eby, as to the maximum temperature that a vacuum can safely maintain. Eby asserts “Witte simply assumes that a trailer with a [cold vacuum pressure] of anything higher than one-micron is defective, without any supporting calculations, analyses, or test. His opinion is wrong.” Eby Report at 6, ECF No. 100-6, Ex. 5.

b.

¹⁰ Praxair quotes Carpenter’s deposition to support this argument. However, nowhere in Carpenter’s deposition does he specify whether warm or cold vacuum readings were taken on the Trailer. He states that the micron reading on the Trailer was 450 microns, but he does not specify whether it is warm or cold. Carpenter Dep., Ex. 7, ECF No. 100-8. However, in his affidavit, Carpenter testifies that the readings are in warm microns. Carpenter Aff., Ex. E, ECF No. 111-5.

Praxair also argues that Plaintiff should not be permitted to offer Witte's testimony in direct contradiction to Plaintiff's testimony. Witte's deposition provides:

Q: Because if your opinions are correct, that this vessel had vacuum issues such that the heat transfer would cause an uncontrolled rise in pressure, you would expect to see that during the course of the trip, wouldn't you?

A: Yes. I would expect to see the pressure going up.

Witte Dep. at 12, ECF No. 100-5. However, Plaintiff testified that the trailer's pressure was normal when he inspected it before leaving Chicago, the pressure did not increase during his drive to Hemlock, and the pressure was still below 12 psig when he arrived at Hemlock. Guinn Dep. at 22–27, ECF No. 100-9.

Praxair further reasons that

Guinn also testified that when he arrived at Hemlock, he built trailer pressure from 12 psig to 20 psig to purge the trailer's delivery hoses. This alone belies Witte's theory that trailer pressure was 70-75 psig when Guinn arrived at Hemlock. It also contradicts Witte's theory that Guinn experienced a rapid pressure increase and release of hydrogen within "milliseconds" after starting to build pressure. If that were the case, the release of hydrogen would have occurred when Guinn built pressure to purge the trailer's delivery hoses. According to Guinn, that didn't happen.

ECF No. 100 at 12. Witte's report directly contradicts this because Witte claims that pressure was building within the Trailer as Plaintiff was driving it from Chicago to Hemlock and that the "trailers [sic] liquid hydrogen had expanded to either liquid full or very close to it." ECF No. 100-2 at 16.

2.

In his response, Plaintiff does not meaningfully engage with either of these arguments. He simply asserts that "Defendant Praxair's arguments about the correctness of Witte's underlying mathematical calculations are really about the correctness of his conclusions, not the reliability of his methodology. In other words, Rule 702 does not permit the district court to evaluate the quality

of an expert's data, inputs or conclusions." ECF No. 116 at 9–10. In its reply, Praxair argues that Plaintiff's response sidesteps the primary issue, which is whether Witte relied "on assumptions that are not in accord with established facts" because his heat transfer calculation "relied on incorrect assumptions." *See* ECF No. 123 at 10 (quoting *Badalamenti v. William Beaumont Hospital-Troy*, 602 N.W.2d 854 (Mich. Ct. App. 1999)).

Plaintiff also argues that Praxair may not use Eby to refute Witte's conclusions because it is not the role of the Court to choose between two competing experts at this stage of litigation. ECF No. 116 at 10. In its reply, Praxair contends that it only used Eby's report "to illustrate the trailer's ability to insulate liquid hydrogen in transit at 14 microns cold compared to 200 microns cold." ECF No. 123 at 5.

3.

Fiba filed a notice that it concurred with Praxair's motion challenging Witte's testimony. ECF No. 111. In its recitation of the facts, Fiba included more details about the Warm Retention Tests that it performed on Trailer 4855's vacuum. In July 2014, the vacuum was measured at 1 micron warm. *Id.* at 4. During the next month, the readings rose to 79 microns warm, which Fiba claims is well within its safe vacuum requirements. *Id.* at 5. Another test was performed in October 2014 and the vacuum reading was 7 microns warm. As part of the test, the pressure in the vacuum was increased to "working pressure" and read at 28 microns warm. *Id.* Fiba performed a third test and the vacuum reading began at 3 microns warm. *Id.* at 5–6. Fiba does not state whether the reading rose during this test and if so, to what extent. However, it claims that the Trailer remained within Fiba's safe vacuum requirements. Fiba performed a fourth test prior to releasing the Trailer to Praxair and the vacuum was read at 14 microns warm. *Id.* at 6.

Fiba further represents that after the incident, Praxair sent the Trailer to Fiba on March 12, 2015 and the vacuum reading was 91 microns warm. *Id.* Praxair sent the Trailer to Fiba again on January 22, 2016 and the vacuum reading was 57 microns warm.

4.

At the hearing on the motion challenging Witte's testimony, Witte testified that a hydrogen trailer should be able to hold a vacuum indefinitely and that a vessel should not be used when it can no longer hold a vacuum. He explained that when a vacuum is faulty, it takes in air. The moisture within the air then attaches to the insulation of the vacuum and freezes solid. It is difficult to remove the moisture once it has entered the vacuum. This is problematic because the moisture increases heat transfer between the outer and inner containers which decreases the effectiveness of the vacuum. Witte described how Fiba had "pulled" the Trailer's vacuum multiple times in an attempt to decrease the heat transfer between the two containers. In Witte's opinion, Praxair should instead have stopped using the Trailer. He conjectured that Praxair elected not to dispose of the Trailer because hydrogen trailers cost on average \$1.2 million.

Witte explained that Praxair had overfilled the Trailer in Chicago prior to Plaintiff's delivery to Hemlock. Witte determined that if the 17 psig road relief valve had been turned off, that 5,400 pounds would have been the maximum amount of hydrogen that should have been in the Trailer. However, Praxair filled the Trailer to 7,000 pounds. Witte referenced the deposition of Ronald Crague in which Crague testified that he instructed the fill technicians to close the valve. Crague testified that he left it within the driver's discretion as to whether the valve should be open or closed during transportation. Witte also referenced Praxair's handbook for drivers which instructs drivers to keep all valves tightly closed. Plaintiff was allegedly told to keep the valve closed during deliveries to prevent the Trailer from venting while on the highway. Witte also noted

that after being filled with hydrogen, the Trailer held the hydrogen for twenty-one straight hours. His report documents that Praxair began filling the Trailer on December 21, 2014 at 11:30 p.m. and completed the fill on December 22, 2014 at 2:15 a.m. Guinn later drove the Trailer to Hemlock, arriving at Hemlock at 8:15 p.m. on December 22, 2014. According to Witte, it is unsafe for a trailer to hold hydrogen for such an extended period of time because the hydrogen will warm and increase the trailer's pressure.

Witte concluded that because the Trailer was overfilled, it became "liquid full" (leaving no space for the hydrogen gas to occupy). He conjectured that the click heard by Plaintiff right before the explosion was the safety valve activating and the accompanying boom was the rupture discs bursting. He acknowledged that his findings are contradicted by Plaintiff's testimony that the Trailer's pressure did not increase from Chicago to Hemlock. However, he explained that regardless of Plaintiff's testimony, the physical evidence supported his conclusion that the Trailer's pressure was building.

Witte also noted that it was unsafe for Praxair to continue using the Trailer after it had 31 incidents of burst discs activating. He explained that a burst disc activation is considered a "near miss" of a more damaging result. He referenced the deposition of Dennis Noel, a Praxair employee who performed maintenance on the Trailer. Dennis Noel Dep., ECF No. 125-8. In his deposition, Noel testified that he had notified Praxair that the burst discs were activating too frequently. *Id.* at 29 ("There's times that we've sit down and discussed it and we brought it to their attention and told them that, yeah, there's too many discs being blown, yes.").

Witte asserted that the Trailer's rain flap is part of the Trailer's safety relief system. He explained that when a rupture disc activates, the hydrogen gas travels through the venting stack at a velocity like a jet engine. He again referenced Noel's deposition in which Noel stated that when

the safety system activates, it sometimes bends or blows off the rain flap. *Id.* at 60 (“Well, when you have 150 pounds of pressure going through that vent stack with the volume pushing it, sometimes it blows it off completely.”); *id.* at 61 (“Through past experience with it, usually they bend or they get blown off.”).

When Defense counsel pressed Witte to explain his calculations about the Trailer’s temperature and pressure, Witte explained that there were multiple factors that could influence a trailer’s temperature, such as whether its vacuum had been filled or when maintenance had been performed on the vacuum.

5.

Defendants present two primary challenges to Witte’s testimony. First, that Witte’s testimony contradicts Plaintiff’s deposition testimony and second, that his calculations incorrectly use warm and cold micron readings interchangeably. Defendants’ motion challenging Witte will be denied.

a.

The reports and testimony of all the experts are consistent on at least one point: that the pressure in the trailer rose to a dangerous level prior to the explosion between Chicago and Hemlock. Without some form of over-pressurization, the safety relief system would not have activated and vented the hydrogen. The experts disagree on why the pressure rose to such a level, but all agree that it rose nonetheless. Witte attributes the rise in pressure to Praxair overfilling the Trailer and the inadequacy of the vacuum in the Trailer. Klein has no opinion as to why the pressure rose, but acknowledges that it rose to an excess level. Klein Report at 9, ECF No. 80-3 (“The partially opened vent flapper created an obstruction and directed the hydrogen being released during the *overpressure* event towards the rear of the trailer...”)(emphasis added); *see*

also Klein Dep. at 8–9 (“Q: My understanding in this case is that you will not be giving opinions as to why the trailer pressure rose and vented hydrogen through the vent stack; is that fair? A: That’s true.”). Eby, Harris, and Rathgeber all attribute the over-pressurization to Plaintiff’s failure to properly maintain the Trailer’s pressure at a safe level. Eby Report at 22, ECF No. 100 (“Mr. Guinn failed to maintain pressure in trailer 4855 at or less than 135 psig.”); Harris Report at 2, ECF No. 96-2 (“Mr. Guinn’s actions of increasing the trailer pressure and not quickly relieving the overpressure, was why the trailer had to release hydrogen.”); *see* Rathgeber Dep. at 49, ECF No. 63-4 (“[I]t doesn’t seem based on the data that [Guinn] was monitoring the pressure in his tank very well -- the trailer.”).

Defendants argue that Plaintiff should not be permitted to offer an expert witness who will offer a factual scenario directly contradicted by the Plaintiff’s own testimony about the facts. At the hearing, Plaintiff’s counsel argued that due to Plaintiff’s head injuries, Plaintiff’s recollections should not be dispositive of the facts. However, if Witte’s report is to be adopted, Plaintiff has offered no explanation as to why he took no action to relieve the Trailer’s pressure while driving to Hemlock or prior to pumping the hydrogen into the receiving tank. Plaintiff has not explained why he could not pull off from the highway, park the Trailer, and vent the Trailer. Equally unexplained is why Plaintiff would have built pressure in the Trailer to pump the hydrogen into the Hemlock tank if the Trailer’s pressure had already reached a dangerous level. If Witte’s testimony is correct, the Trailer’s pressure would have reached a significant level by the time Plaintiff began pumping the hydrogen. These actions occurred before the explosion and Plaintiff’s alleged head injury. Accordingly, the inconsistencies between his deposition and Witte’s report are not explained based on his later brain injury. The unresolved question is why Plaintiff did not relieve pressure in the Trailer when it reached a dangerous level.

While Plaintiff's decision to offer Witte's testimony includes the risk of harming Plaintiff's case by introducing his comparative negligence, it is Plaintiff's prerogative to introduce it. The Sixth Circuit was presented with a similar scenario in *Lee v. Smith & Wesson Corp.* in which the conclusions of the plaintiff's expert witness contradicted the plaintiff's testimony. 760 F.3d 523 (6th Cir. 2014). The district court excluded the testimony of the expert witness. The Sixth Circuit reversed and remanded the case. The Sixth Circuit explained that the district court should have admitted the testimony of the expert witness despite its discrepancies with the plaintiff's testimony. *Id.* at 526. The expert was qualified and "a jury presented with no believable alternative explanation could believe that [the plaintiff's] testimony was wrong." *Id.* The court noted that "a party is not precluded from proving his case by any relevant evidence, even though that evidence may contradict the testimony of a witness previously called by him." *Id.* (quoting *Dickerson v. Shepard Warner Elevator Co.*, 287 F.2d 255, 260 (6th Cir. 1961)). The fact that Witte's testimony implicates Plaintiff's comparative negligence is not a bar to Plaintiff's decision to call Witte as an opinion witness.

So too here. Plaintiff's testimony does not establish the facts of the case and cannot form the basis for concluding that Witte's report contradicts established fact. Though it is unclear how Plaintiff will resolve the discrepancies between his testimony and Witte's opinion, indeed, all of the opinion witnesses, that is a risk that Plaintiff has elected to assume.

b.

Defendants also argue that Witte's calculations inconsistently use warm and cold microns. However, Defendants are challenging Witte's data and results, not his methodology in reaching those results. Because Defendants have not demonstrated that Witte's methodology is defective, his testimony will not be excluded. Furthermore, Witte explained that the alleged inconsistencies

in his calculations are due to a variety of factors that can influence the calculations' results. Accordingly, he will be permitted to testify and Defendants will have an opportunity to challenge him at trial.

B.

Michael Klein's report represents that he "is a Professional Engineer, a Certified Hazardous Material Manager and a Certified Fire and Explosion Investigator with 25 years of experience in the design, planning, and delivery of high-value projects for the government and private sectors." Klein Report, Ex. 3, ECF No. 72-3 at Ex. A.

Klein begins his report by explaining the basic properties of hydrogen, including the fact that it is commonly transported as a liquid in tankers, has a broad flammability range, and can lead to overpressure in tankers due to its large expansion ratio. *Id.* at 4–5. He continues by introducing each of the defendants (Praxair, Fiba, Chart, and Fike) and their involvement with the incident. *Id.* at 5. He briefly describes Plaintiff's delivery of hydrogen and the ensuing explosion. *Id.* at 6. Klein explains that he, Klein, inspected the Trailer in 2015 in making his determinations. He observed that damage from the explosion was limited to the rear portions of the Trailer. *Id.* at 7.

He explains that a safe hydrogen delivery liquid tanker must have "adequate ventilation, designing and operating to prevent leakage and eliminate potential ignition sources." *Id.* Due to hydrogen's wide flammability range, great care must be taken to prevent any possible source of ignition. *Id.* at 8. The materials in the rear of the Trailer were designed to eliminate any potential ignition source. *Id.* The system also contained relief systems that could be used if the tanker experienced excessive pressure. *Id.* This relief system would vent the hydrogen in such a way that it would not encounter potential ignition sources. *Id.*

Klein claims that the flapper over the venting stack must have been defective. He explains that the pathway out of a venting stack must be unobstructed so that hydrogen can escape if the safety relief system is activated. *Id.* at 9. He notes that a photograph of Trailer 4855's venting stack shows that the rain flap is only partially opened. "This partial opening of the vent flapper would have prevented hydrogen from being directly vented up into the atmosphere during an over pressurization event. A partially opened flapper as the photo depicts would result in the hydrogen being vented back and down toward the running lights, rear cabinet and the area where Guinn was working." *Id.* The flame patterns indicate that the hydrogen was directed towards the rear of the trailer upon the "liquid tanker jacket and structural parts of the liquid tanker." *Id.* The lights used on the exterior of the tanker were not designed to be explosion proof. Klein claims that these lights were the likely ignition source for the explosion. He notes that burn patterns are present at all areas of the lighting. *Id.*

1.

Praxair's primary challenge to Klein's report is that he does not evaluate, let alone eliminate, other possible causes of the explosion's ignition. In his report, Klein asserts that "The inappropriate lighting system was likely the ignition source of the fire." However, during his deposition, he testified that static electricity or friction could also have ignited the explosion.

Q. Okay. As I understand it as Mr. Witte explained to us at his recent deposition, that means that even static electricity could ignite hydrogen?

A. Yes, it has a low -- it requires low energy. And so a static charge such as somebody introducing a pen into a pocket creating static electricity, it will ignite. (Gesturing.) And so when we dealt with -- with hydrogen, we made sure that our clothing were -- were static resistant and we also had grounding mechanisms on our hands, etcetera, so we wouldn't be able to discharge a static charge to the hydrogen source we were dealing with. (Gesturing.)

Q. All right. And, as I understand it, the ignition point in hydrogen is so low that even the friction of hydrogen moving across the vent stack could ignite it, true?

A. I can't say in that particular instance it is true, but it is known that flowing hydrogen with friction, it will ignite.

Klein Dep. at 12–13, Ex. 3, ECF No. 100. Praxair then quotes Witte's deposition, in which he also states that friction and static electricity were possible sources of ignition.

Q: It could be something as simple as static electricity, correct?

A: That's correct.

Q. And that would include, also, friction on the gas itself, correct?

A: That is correct.

Q: Including friction of the gas escaping through the vent stack, correct?

A: That is correct.

Witte Dep. at 73, Ex. 4, ECF No. 100.

Because Klein did not rule out other possible ignition sources, Praxair contends that "[t]his type of correlative reasoning is not enough to reasonably eliminate an alternative cause." ECF No. 100 at 17 (quoting *Lowery v. Enbridge Energy Ltd. P'ship* 898 N.W.2d 906, 922 (Mich. 2017)).

In its response to Praxair's motion, Plaintiff argues that experts "may rely properly upon a wide variety of sources and may employ a similarly wide choice of methodologies in developing an expert opinion." ECF No. 116 at 11 (quoting *Cooper Car A. Nelson & Co.*, 211 F.3d 1008, 1020 (7th Cir. 2000)). However, similar to his response to Praxair's opposition to Witte, Plaintiff sidesteps the question and does not address the primary issue presented by Praxair's motion. Specifically, whether Klein's testimony establishes the cause of the explosion, even though he does not rule out the possibility of other factors that may have been the cause.

2.

In its motion challenging Klein, Fiba argues that Klein did not articulate a methodology for his conclusion that the rain flap malfunctioned and the lighting system ignited the explosion.

ECF No. 101. Fiba contends that the fact that Klein “did not conduct a duplicate test that would evidence an explosion and *relied only on photographs of the physical condition* of the lighter after the incident [is] sufficient to exclude his opinion as one that was unreliable.” *Id.* at 6 (emphasis in original). Klein conceded that he never touched, tested, or performed any modelling of the rain flap and only relied upon photographs taken ten months after the incident in making his determinations. Furthermore, he did not review the photographs taken by Praxair immediately after the incident. Klein Dep. at 33, 52, ECF No. 101-3. Curiously, Praxair’s photographs taken immediately after the incident show the rain flap in the closed position rather than the partially opened position as shown in Klein’s photographs. Klein Dep. Photograph, ECF No. 101-4.¹¹

In his response, Plaintiff argues that it was not necessary for Klein to explain the methodology of his conclusions because “[b]ased upon Klein’s education and engineering experience, it was obvious to Klein how the explosion started. Because it was obvious to Klein how this explosion happened, there was no need for Klein to do any formal mathematical or scientific calculations.” *See* ECF No. 115 at 5. Plaintiff contends that Klein’s testimony is reliable because Klein visually inspected the Trailer and took photographs in October 2018. *Id.* at 8. Plaintiff then presents three other cases in which an expert’s opinion was permitted even though the expert had not performed any tests. *Id.* at 9–10. Plaintiff explains that “when an expert believes an engineering opinion is so obvious as to not require formal calculations to come to a conclusion, that opinion is admissible where the expert has applied his knowledge and experience to observed evidence.” *Id.* He argues that Fiba’s arguments against Klein’s reliability should be reserved for cross-examination rather than excluded. *Id.* at 10.

¹¹ Similar to Praxair, Fiba also argues that Klein’s opinion should be excluded because he did not eliminate other potential ignition sources of the explosion, such as static electricity or friction. *Id.* at 9.

Fiba also contends that Klein is not a professional mechanical engineer, chemical engineer, nor a human factors expert. *Id.* at 4. Instead, he is an ocean and civil engineer with certifications in hazardous materials management and fire and explosion investigation. *Id.* Fiba argues that neither his report nor his deposition demonstrate compliance with “the scientific method required by the NFPA 921 for fire investigations.” *Id.* at iii. In an affidavit, Klein represents that he is a Certified Fire and Explosion Investigator which is “an international registry that recognizes qualified fire and explosion investigators. The Fire Investigator Certification is based solely on the scientific principles of NFPA 921 ‘Guide for Fire and Explosion Investigations.’” Klein Aff., ECF No. 115-4. Fiba argues that NFPA guidelines require investigators to use the scientific process in formulating their hypothesis and determination. *See* ECF No. 124 at iii. It contends that the guidelines require the investigator to “collect analyze and the [sic] test that hypothesis against, ‘all known facts as well as the body of scientific knowledge associated with the phenomena relevant to the specific incident.’” *Id.* at iii (quoting Exhibit B, NFPA 921, *Guide for Fire and explosion Investigations*, 22 (2017)). It argues that Klein’s methodology of analyzing photographs of the Trailer and inspecting the Trailer ten months after the incident falls short of these guidelines. *See id.* at iv–v.

3.

At the hearing, Klein testified that he inspected the Trailer in October 2015, ten months after the incident. Praxair only permitted Klein to visually inspect the Trailer. Praxair did not permit him to touch the Trailer. His testimony centered on the Trailer’s vent stack rain flap which he claimed was a component of the Trailer’s safety relief system. He explained that the flap functioned like a see-saw with the flap turning on a bolt. The flap’s lid was on one side covering the vent stack and a weight was on the other side acting as a counter-balance. When no gas was

being vented through the vent stack, the flap sat level upon the the stack. When gas was being vented, the gas would force the lid to rise into ninety-degree vertical position. When gas was no longer venting, the weight of the lid would cause the rain flap to return to its original level position. Federal regulation requires the rain flap to function in this way.

(7) Arrangement and location of pressure relief devices.

(i) The discharge from any pressure relief system must be directed upward and be unobstructed to the outside of the protective housing in such a manner as to prevent impingement of gas upon the jacket or any structural part of the vehicle.

(ii) Each pressure relief valve must be arranged or protected to prevent the accumulation of foreign material between the relief valve and the atmospheric discharge opening in any relief piping. The arrangement must not impede flow through the device.

49 C.F.R. §173.318(7)(i).

Based on his observations of the Trailer, Klein concluded that at the time of the incident, the rain flap only opened partially rather than the full vertical position. As the hydrogen gas was travelling up the venting stack, it encountered the partially opened rain flap and was deflected downward towards the Trailer. Klein contends that had the rain flap functioned properly, it would have risen to a full vertical position and the hydrogen would have escaped the stack unencumbered. Klein conjectured that the rain flap failed to fully open because the hinge mechanism was too tight.

However, this alone would not have caused the explosion. Something would have to ignite the hydrogen to cause the explosion. Based upon the burn marks on the exterior of the vent stack and the Trailer, Klein concluded that the Trailer's exterior lights ignited the hydrogen. The burn patterns displayed a "clean burn pattern" in which the flames burned the paint off all the way down to the underlying metal. Klein explained that his conclusions based upon the clean burn pattern are supported by the NFPA Guide for Fire and Explosion Investigations. He noted that it was unnecessary for him to recreate the burn because the NFPA Guide supported his conclusion based

on his observations of the Trailer's burn pattern. He did not perform his own modelling, but instead relied upon the modelling performed by Praxair.

He also based his theory on the fact that this safety relief system had activated thirty-one times prior to this incident and an explosion had never occurred in any of those instances. He concluded that the failure of the stack vent flap was because Fiba had replaced the rain flap just six weeks prior to the incident.

4.

Praxair's primary challenge to Klein's report is that he does not eliminate other possible sources of the explosion's ignition, such as electricity or friction. During the hearing, Klein explained that he had considered static and friction as possible ignition sources. However, he ruled these out because the burn pattern would have been different had static or friction ignited the hydrogen. He explained that if friction had ignited the hydrogen, the burn pattern would have been more "localized." In his deposition, he explained

...if you had seen friction it had spilled on there, there would have been a fire pattern closer to where the -- where the fuel had spilled down, it -- friction. But you can see where the -- where the hydrogen moved to the various lighting components throughout the trailer including the back rear lighting on the tanker itself and the lighting that encompassed the doghouse and then the spotlighting that was part of the doghouse itself. All the lights were involved in the fire.

Klein Dep. at 51, ECF No. 100-4. Based upon Klein's deposition and his testimony at trial, it is apparent that Klein did consider other possible sources of ignition and ruled them out.

Klein was asked to explain how hydrogen, a gas lighter than air, could have travelled down the trailer. Klein explained that the hydrogen exited the vent stack with such force, that when it encountered the obstructing rain flap, it was forced down. He explained that the speed of the hydrogen gas was such that the flap temporarily deflected the gas down despite it being lighter

than oxygen. Though this theory may or may not withstand scrutiny at trial, Defendants have proffered no other explanation for the burn patterns found on the exterior of the Trailer.

Defendants' motion will be denied and Klein will be permitted to testify as an expert witness. Defendants have not proven that Klein is unqualified or that his assessment is contrary to methodology accepted in the field of chemical and fire assessments.

IV.

Fike's motion for summary judgment will now be addressed. A motion for summary judgment should be granted if the "movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). The moving party has the initial burden of identifying where to look in the record for evidence "which it believes demonstrate the absence of a genuine issue of material fact." *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

The burden then shifts to the opposing party who must set out specific facts showing "a genuine issue for trial." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250 (1986) (citation omitted). "The party opposing summary judgment cannot rest on its pleading or allegations, to prevail, they must present material evidence in support of their allegations." *Leonard v. Robinson*, 477 F.3d 347 (6th Cir. 2007) (citing *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986)). The Court must view the evidence and draw all reasonable inferences in favor of the non-movant and determine "whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law." *Id.* at 251–52.

A.

As explained above, in the fall of 2017, Praxair and Fiba filed separate Notices of Non-Party Fault "pursuant to MCL 600.2957, MCL 600.6304, and MCR 2.112(K)." ECF No. 19, 20. Both presented five parties, including Fike, not identified in Plaintiff's complaint and alleged that

these parties were at fault for Plaintiff's damages. Plaintiff subsequently file an amended complaint adding Fike as a defendant. ECF No. 27.

A Notice of Non-Party Fault relates to the apportionment of damages. In 1995, the Michigan Legislature enacted a tort reform bill that, among other things, required courts to apportion damages based on percentage of fault. *See* Mich. Comp. Laws §§ 600.6304, 600.2957. This included a several liability scheme, not a joint liability scheme. Mich. Comp. Law 600.2956 provides:

Except as provided in section 6304, in an action based on tort or another legal theory seeking damages for personal injury, property damage, or wrongful death, the liability of each defendant for damages is several only and is not joint...

M.C.L. 600.2956. Michigan law further provides that "the liability of each person shall be allocated under this section by the trier of fact and, subject to section 6304, in direct proportion to the person's percentage of fault." M.C.L. 600.2957.

Section 6304 requires the finder of fact to determine the amount of each plaintiff's damages as well as the percentage of fault of every party that contributed to the injury. It provides:

(1) In an action based on tort or another legal theory seeking damages for personal injury, property damage, or wrongful death involving fault of more than 1 person, including third-party defendants and nonparties, the court, unless otherwise agreed by all parties to the action, shall instruct the jury to answer special interrogatories or, if there is no jury, shall make findings indicating both of the following:

(a) The total amount of each plaintiff's damages.

(b) The percentage of the total fault of all persons that contributed to the death or injury...regardless of whether the person was or could have been named as a party to the action.

M.C.L. 600.6304.

After a plaintiff has commenced an action, any party may file a Notice of Non-Party at Fault pursuant to Michigan Court Rules 2.112(K), which provides:

(3) *Notice.*

(a) A party against whom a claim is asserted may give notice of a claim that a nonparty is wholly or partially at fault. A notice filed by one party identifying a particular nonparty serves as notice by all parties as to that nonparty.

(b) The notice shall designate the nonparty and set forth the nonparty's name and last known address, or the best identification of the nonparty that is possible, together with a brief statement of the basis for believing the nonparty is at fault.

(c) The notice must be filed within 91 days after the party files its first responsive pleading. On motion, the court shall allow a later filing of the notice on a showing that the facts on which the notice is based were not and could not with reasonable diligence have been known to the moving party earlier, provided that the late filing of the notice does not result in unfair prejudice to the opposing party.

(4) *Amendment Adding Party*. A party served with a notice under this subrule may file an amended pleading stating a claim or claims against the nonparty within 91 days of service of the first notice identifying that nonparty. The court may permit later amendment as provided in MCR 2.118.

M.C.R. 2.112(K)(3)–(4) (*italics in original*).¹²

After a party has filed a Notice of Non-Party at Fault, the parties may amend their pleadings. M.C.L. 600.2957 provides:

(1) In an action based on tort or another legal theory seeking damages for personal injury, property damage, or wrongful death, the liability of each person shall be allocated under this section by the trier of fact and, subject to section 6304, in direct proportion to the person's percentage of fault. In assessing percentages of fault under this subsection, the trier of fact shall consider the fault of each person, regardless of whether the person is, or could have been, named as a party to the action.

¹² M.C.R. 2.112(K) is a substantive rule and pursuant to *Erie*, it will be adopted here. In *Greenwich Ins. Co. v. Hogan* the court found that

the rule [M.C.R. 2.112(K)] is a necessary component of Michigan's statutory scheme of "fair share liability." The failure of this federal court to include the rule's notice provision as part and parcel of Michigan's substantive tort law would result in tort litigation differing materially depending on whether a suit was brought in state court or as a diversity action in federal court. Absent application of the rule, plaintiffs would have neither the benefit of the "shield" protecting them from the allocation of fault to a non-party without notice, nor the opportunity to amend the complaint to include those identified non-parties in a timely manner.

351 F.Supp.2d 736 at 739 (W.D. Mich. 2004); *see also Sedgwick Ins. v. F.A.B.E. Custom Downstream Systems, Inc.*, 47 F.Supp. 3d 536, 545 (E.D. Mich. 2014).

(2) Upon motion of a party within 91 days after identification of a nonparty, the court shall grant leave to the moving party to file and serve an amended pleading alleging 1 or more causes of action against that nonparty. A cause of action added under this subsection is not barred by a period of limitation unless the cause of action would have been barred by a period of limitation at the time of the filing of the original action.

(3) Sections 2956 to 2960 do not eliminate or diminish a defense or immunity that currently exists, except as expressly provided in those sections. Assessments of percentages of fault for nonparties are used only to accurately determine the fault of named parties. If fault is assessed against a nonparty, a finding of fault does not subject the nonparty to liability in that action and shall not be introduced as evidence of liability in another action.

M.C.L. 600.2957.

B.

Plaintiff filed his initial complaint on May 4, 2017. On June 16, 2017, Praxair filed its answer to Plaintiff's complaint. 91 days later on September 15, 2017, Praxair filed its Notice of Non-Party Fault, implicating Fike and four other entities. ECF No. 19. On July 19, 2017, Fiba filed its answer to Plaintiff's complaint. 90 days later on October 17, 2017, Fiba filed its Notice of Non-Party Fault, also implicating Fike and four other entities. ECF No. 20. As noted earlier, neither Praxair nor Fiba elected to file crossclaims against any party.

Both notices contained general allegations of non-party fault, presenting conclusory suggestions of negligence with no factual explanation of breach of duty or causation. Specifically, Fiba alleged that "Fike may have liability arising out of the incident as its rupture disks may have created conditions that caused or were the proximate cause of the alleged incident and damages complained of by the Plaintiff." ECF No. 20 at 3. Praxair alleged that "Fike Corporation's potential negligence in manufacturing the bursting disc may have caused or created conditions initiating the incident that was a proximate cause, or the proximate cause, of plaintiff's alleged injuries and damages." *Id.* at 2.

However, it is unclear why Praxair identified Fike as a party at fault when its own employee, Rathgeber, found that the rupture discs did not malfunction. In his deposition, Rathgeber testified:

Q: As part of the RCA, did you determine that any actions by Fike were a cause of this incident?

A: Any actions by Fike, the company?

Q: Yes.

A: No.

Q: The -- Praxair did not reach a determination that there was a problem with the burst disk that was a cause of the failure, correct?

A: Correct...

Q: Similarly, part of the -- there was no determination that Fike manufactured a bad bursting disk?

A: Correct.

--

A: The burst disk is a safety device, that's correct.

Q: Okay. And then that's a secondary safety device after, what, the pressure relief valve?

A: Correct.

Q: So the event that occurred in this case is an example of the safety devices working?

A: That's correct.

Q: Because I think, as you said earlier, if they didn't work, the entire tank full of liquid hydrogen could have exploded?

A: That's correct.

--

Q: All right. And that's the intended purpose of a burst disk, if there's an excess buildup of pressure, it's designed to activate or rupture, correct?

A: Yeah, typically burst disks are for fire case scenarios. So if there was heat onto the trailer, the burst disk is there to relieve a good amount of volume, you know, during that condition.

Q: That's what it's intended to do, correct?

A: Correct.

Q: All right. And as you've indicated previously in your testimony, you found no defect with the burst disk on the trailer that was involved with Mr. Guinn's incident, correct?

A: No -- yeah, I don't think so, no, based on what I read and the MEL lab report, no.

Q: What I said was correct --

A: Yes.

Q: -- there was no defect found?

A: Yes.

ECF No. 63-4 at 89-90, 134-135, 151.

C.

As permitted by M.C.R. 2.112(K), on December 19, 2017, Plaintiff filed his first amended complaint which added Fike as a defendant to the action. ECF No. 27. It provided:

Fike Corporation manufactured the burst or rupture discs used on the subject trailer in the regular course of its business.

Defendant Fike Corporation negligently designed, tested, approved, manufactured, produced and/or recommended the burst or rupture discs used on the subject trailer in that Fike failed to exercise reasonable care to prevent the burst or rupture discs from creating an unreasonable risk of harm to a person who might reasonably be expected to use it in an expected or reasonably foreseeable manner in one or more of the following ways:

- a. by producing one or more burst or rupture discs that contained manufacturing, design and/or production defects that caused it to fail resulting in an uncontrolled release of hydrogen gas from the subject trailer;
- b. by negligently failing to adequately test and/or use adequate quality control procedures to alter it to manufacturing or production defects;
- c. by recommending and/or supplying an inadequate and/or inappropriate burst or rupture disc for use on Praxair, Inc., unit no. 4855;
- d. other acts of negligence that may be come [sic] known through the course of discovery;

Fike Corporation expected the burst or rupture disc to reach, and it did reach, the consumer without substantial change to the condition in which defendant produced and sold it.

Id. at 2.

Despite the allegations against Fike in Plaintiff's amended complaint, Plaintiff's expert Witte concluded that Fike's rupture discs did not malfunction. Witte Report, ECF No. 72-2 at 16 ("The rupture disc appears to have operated as designed."). In his report, Witte specifically mentioned Fike and stated "Fike does not appear to have any responsibility for this explosion as the rupture discs it sold to FIBA/Praxair for trailer 4855 appear to have worked as designed." *Id.* at 17. Plaintiff's other expert, Klein, did not mention Fike when apportioning any responsibility for the incident. ECF No. 72-3 at 9–10. He only mentioned Praxair, Fiba, and Chart. *Id.*

Despite Plaintiff's experts' conclusions that the rupture discs did not malfunction, Plaintiff refused to dismiss Fike unless Praxair and Fiba agreed to dismiss their Notice of Non-Party Fault against Fike and thus, vacating the empty chair. In Plaintiff's Supplemental Brief Regarding Order to Show Cause, Plaintiff stated that

After Plaintiff's experts analyzed the case and depositions of Praxair Director of Safety for US Industrial Gases, Don Rathgeber, and Fike Manager of Pressure Relief and Explosion Protection Applications, Alan McQueen, were taken, it became apparent that Fike would not be the target of Plaintiff's claims or settlement negotiations and Plaintiff did not expect Fike to contribute...

As noted by the Court in its Order, Praxair through Mr. Rathberger, admitted that it did not determine that any actions committed by Fike were the cause of this incident. At this stage in the litigation, Plaintiff would agree to dismiss his claims against Fike set forth in Count III of the Amended Complaint if Praxair and Fiba dismiss their Notice of Non-Party Fault against Fike. This would clean up the litigation and would be in keeping with the testimony of the Praxair's Director of Safety.

ECF No. 70 at 2–3.

Plaintiff also refused to dismiss his claims against Fike because of the determinations by Fiba's expert, Randolph J. Harris. Fiba disclosed a draft report by Harris dated November 2, 2018.

Harris Report, ECF No. 113-2. In the draft report, Harris represented that he examined Trailer 4855, reviewed the depositions of various individuals (including Plaintiff's deposition), the reports of Plaintiff's experts Michael Klein and Thomas Witte, and other related materials. *Id.* Harris determined that

The release of hydrogen was caused by the activation of the rupture disc. This disc was designed to operate, or rupture at 219 psi. The safety relief valves are in the same system and are designed to operate at 151 psi. These relief valves still operated properly after the explosion, but did not operate during or before the explosion. This indicates that the rupture disc failed at too low a pressure, before the relief valves activated. This was probably due to hydrogen embrittlement, as later reports indicate. Unlike the relief valves, (which relieve the high pressure, then reseal), the rupture disc bursts and cannot re-close. The premature activation of this rupture disc caused the release of hydrogen and was the major cause of the explosion.

Id. However, Harris also attributed fault to Plaintiff.

Mr. Guinn drove the trailer to the Hemlock hydrogen tanks without incident. He depressurized the Hemlock storage tank from 169 psi to 130 psi. (The instructions indicate not to depressurize below 120 psi). He also pressurized the hydrogen tanker up to above 130 psi, utilizing the pressure builder. He indicated that he was filling normally for about 8 minutes and the meter showed 300 - 400. (Thus, the tanker was not overfilled). Then, the trailer pressure started to rise. As he reached for the vent valve to relieve the pressure, he heard a loud click and the explosion occurred. Mr. Guinn's actions of increasing the trailer pressure and not quickly relieving the overpressure, was why the trailer had to release hydrogen. The trailer and pressure builder are apparently still operating fine without defect. The Hemlock hydrogen tank's pressure should have been reduced more, to 120 psi. It is likely that Mr. Guinn was not paying enough attention to the unloading procedure.

Id. Harris concluded the report by stating "These opinions are preliminary at this time. There are more materials to review. I reserve the right to change these opinions, due to additional information." *Id.*

D.

Fike contends that there is no issue of material fact concerning Fike's culpability because both of Plaintiff's experts and Rathgeber have concluded that Fike was not responsible for the explosion. ECF No. 80 at 17. Plaintiff filed a response opposing Fike's motion, but neither Praxair

nor Fiba (who had earlier introduced Harris) filed responses opposing Fike's motion for summary judgment.

In his response, Plaintiff "acknowledges that his experts have not attributed any fault to Defendant Fike." ECF No. 94, 10–11. Plaintiff characterizes the differences between his experts and Harris as "Plaintiff's experts have not reached the same conclusion that Defendant FIBA's expert reached." *Id.* at 11. A more precise characterization would be that Plaintiff's experts and Harris directly contradict each other, with Plaintiff's experts attributing no fault to Fike and Harris attributing fault against Fike.

It is unusual, of course, for a Plaintiff to rely on an opposing party's witness opinion that the opposing party does not advance. And that is particularly true where the same witness tends to corroborate Plaintiff's comparative fault. *See* ECF No. 113-2 at 2 ("The cause of the explosion was Mr. Guinn not following proper procedure and the premature activation of the rupture disc."). Plaintiff however, may not pick and choose those aspects of his experts' reports that support his case, but then reject those aspects that weaken his case. The same holds true for the expert reports of opposing counsel. He may not pick and choose aspects of Harris's report that allow him to recover from Fike, but then reject those aspects that attribute fault to him. To do so would undermine the fundamental purpose of expert witnesses as individuals whose purpose is to provide guidance on technical and scientific matters.

Plaintiff has not demonstrated that a genuine issue of material fact concerning Fike's alleged breach of duty. He cannot rest his entire argument on the expert report of opposing counsel that contradicts the conclusions of his own experts. He has presented the reports of both of his expert witnesses and neither attributes responsibility to Fike. Plaintiff selected and presented his

expert reports and he must abide by their findings. Accordingly, Fike's motion for summary judgment will be granted.¹³

Additionally, Praxair and Fiba's Notices of Non-Party at Fault will be stricken. Neither party at any time has filed a crossclaim against Fike nor did they oppose Fike's motion for summary judgment. Praxair and Fiba have done nothing to preserve, substantiate, or develop their Notices of Non-Party Fault against Fike. Accordingly, the Notices will be stricken.

V.

Praxair's motion for summary judgment will be addressed next. As explained above, Plaintiff's First Amended Complaint presents a simple count of negligence against Praxair with a plethora of different theories of the Defendant's breach of duty. ECF No. 27 at 5–6. Under Michigan law, a prima facie case of negligence contains four elements: "(1) that the defendant owed a duty to the plaintiff; (2) that the defendant breached that duty; (3) that the defendant's breach of duty was a proximate cause of the plaintiff's damages; and (4) that the plaintiff suffered damages." 215 Mich.App. 198, 203 (Mich. Ct. App. January 16, 1996).

Praxair argues that Guinn cannot prove the second and third elements of his prima facie case, namely breach and causation. Each argument will be addressed in turn.

A.

Praxair contends that Plaintiff cannot identify any specific evidence to support his allegations that Praxair breached its duties to Plaintiff. ECF No. 106 at 16. It argues that because Plaintiff's experts found that the Trailer's safety relief system functioned properly, Plaintiff has no evidence to support his allegations. *Id.* at 17. It further argues that Plaintiff's experts have

¹³ Fike also contends that its motion should be granted because the allegations in Plaintiff's complaint are conclusory and inadequate under Michigan's Product Liability statutes. This argument will not be addressed since Plaintiff's experts do not assign any responsibility to Fike for the incident.

introduced new theories that fall beyond Plaintiff's First Amended Complaint and that if the Court were to consider these new theories, Praxair is still not liable. *Id.* at 18–19. Plaintiff responds that typically, the question of whether a duty has been breached is a question of fact reserved for the jury.¹⁴ ECF No. 125 at 16.

As explained above in the Court's decision to grant in part Plaintiff's motion for reconsideration of its order denying its motion to amend his complaint, all the allegations of the Second Amended Complaint (except those related to overfilling the Trailer and the signage at Hemlock) are subsumed by the unchallenged allegations within the First Amended Complaint. This includes Plaintiff's allegations related to the faulty vacuum, the Trailer's history of activated rupture discs, and the vent stack rain flap. Plaintiff has presented sufficient evidence to raise an issue of material fact regarding whether Praxair breached its duty to Plaintiff.

Concerning the faulty vacuum, Plaintiff has presented evidence that the Trailer had internal and external cracks. Along with other factors, this allegedly made the vacuum faulty. As explained by Witte, a faulty vacuum attracts air and moisture and decreases the vacuum's effectiveness. According to Witte, Praxair should have stopped using the Trailer when it became apparent that the vacuum could not maintain an acceptable temperature. Additionally, according to Witte, the Trailer had a long history of activating rupture discs. Witte attributes this history to the Trailer's faulty vacuum. Praxair argues that such information is irrelevant because it is unknown under what circumstances the rupture discs activated. However, this argument does not refute Witte's conclusions nor does it resolve whether Praxair breached its duty of care by not taking the Trailer out of service or doing more to address the Trailer's allegedly dangerous condition.

¹⁴ Plaintiff correctly remarks that Praxair "does not appear to be contesting that it owed a general duty of care in this case, but instead appears to be contesting whether there is any evidence that it *breached* that standard of care." ECF No. 125 at 16 (emphasis in original).

Furthermore, as established by Klein's testimony, there remains the issue of whether the Trailer's rain flap malfunctioned and if so, why. The Parties have presented photographs of the rain flap in different positions. In one photograph, allegedly the earliest photograph, the rain flap is closed, completely covering the vent stack. This supports the proposition that the rain flap functioned properly when the explosion occurred. When the hydrogen gas travelled up the vent stack, it came in contact with the rain flap and forced the flap into a completely vertical position. However, in another photograph, the rain flap is partially open, indicating that the flap malfunctioned. When the hydrogen gas travelled up the vent stack, it came in contact with the rain flap, but the flap did not rise to a completely vertical position as it was supposed to do. Instead, it only opened partially and prevented the hydrogen gas from escaping the vent stack vertically. This theory is also supported by the burn marks on the body of the Trailer, indicating that rain flap diverted the gas down to the body of the Trailer.

Though Praxair's expert Eby disagrees with most of the assertions by Plaintiff and his experts, a motion for summary judgment is not the time to referee a "battle of the experts." *Kalamazoo River Study Group v. Rockwell Intern. Corp.*, 171 F.3d 1065, 1072 (6th Cir. 1999) (explaining that "credibility judgments, the weighing of evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of the judge."). Plaintiff has presented sufficient evidence that Praxair breached its duty to Plaintiff by failing to maintain the Trailer in a safe condition.

B.

Praxair's second argument is that Plaintiff cannot rely upon Witte's testimony to establish causation. Praxair repeats the argument against Witte that it presented in its motion challenging Witte, namely that Witte's testimony refutes Plaintiff's testimony. As explained above, Witte's

testimony will not be excluded solely because it contradicts Plaintiff's testimony. Plaintiff is taking a risk by offering testimony that corroborates his comparative negligence, but it is a risk Plaintiff is permitted to take.

Accordingly, Praxair's motion for summary judgment will be denied.

VI.

Fiba's motion for summary judgment will now be addressed. Like Praxair, Fiba argues that neither Plaintiff nor his experts can prove that Fiba breached its duty to Plaintiff nor that Fiba caused the explosion. It argues that "Plaintiff turns to his experts to apply mistaken calculations to determine the vacuum readings on the day of the incident and examine a photograph taken after the incident occurred. ECF No. 108 at 17.

Plaintiff and his experts have presented sufficient evidence to raise an issue of material fact regarding Fiba's potential breach of duty and causation. The evidence includes the vacuum's cracked condition and inability to consistently hold an appropriately low temperature, the history of burst disc activations, and the possible malfunction of the rain flap. Fiba had the responsibility to inspect and maintain the Trailer. A mere two months prior to the incident, Fiba inspected the Trailer and issued a certificate certifying that

This is to Certify that FIBA Technologies, Inc. hereby confirms that the product being supplied conforms to the specifications set forth by Purchase Order Number: 60011861, and referenced to FIBA Work Order Number: OH16534...If the product is a trailer, FIBA also certifies that the equipment has been manufactured in accordance with all requirements of the U.S. Federal Motor Vehicle Safety Standards, at the time of manufacture.¹⁵

¹⁵ Fiba provided the Certificate of Compliance to the Court and the Parties pursuant to settlement conference discussions and a Court order. ECF No. 41 ("[A]ll parties in attendance agreed that the following documents would be exchanged with copies being furnished to the Court: A copy of Fiba's most recent warranty certification to Praxair regarding Fiba's regular five-year maintenance of Trailer 4855.").

Fiba did not advise Praxair to remove the Trailer from use despite the vacuum's inability to consistently hold an appropriate temperature and history of burst discs activating. Fiba was the party that installed the new rain flap on the Trailer just two months prior to the incident that potentially malfunctioned. Both the photograph of the rain flap partially opened and the burn marks on the body of the Trailer seemingly support Plaintiff's allegations that the flap malfunctioned. Plaintiff and his experts have presented sufficient evidence of an issue of material fact. Accordingly, Fiba's motion for summary judgment will be denied.

VII.

Accordingly, it is **ORDERED** that Plaintiff's motion for reconsideration of the Court's order denying Plaintiff's motion to amend his complaint, ECF No. 110, is **GRANTED in part**. Subparagraphs 23 (b), (c), (d), (e), (h), (i), and (j) of Count I and the entirety of Count II of Plaintiff's proposed Second Amended Complaint, ECF No. 89-3, substitute Counts I and II of Plaintiff's First Amended Complaint, ECF No. 27.

It is further **ORDERED**, that Plaintiff file his second amended complaint conforming to this order **on or before May 31, 2019**.

It is further **ORDERED**, that Praxair's motion to exclude Plaintiff's experts' testimonies, ECF No. 100, is **DENIED**.

It is further **ORDERED**, that Fiba's motion to exclude Plaintiff's expert's testimony, ECF No. 101, is **DENIED**.

It is further **ORDERED**, that Fike's motion for summary judgment, ECF No. 80, is **GRANTED** and Fike **DISMISSED** as a defendant.

It is further **ORDERED**, that Praxair's Notice of Non-Party at Fault, ECF No. 19, is **STRICKEN**.

It is further **ORDERED** that Fiba's Notice of Non-Party at Fault, ECF No. 20, is **STRICKEN**.

It is further **ORDERED** that Praxair's motion for summary judgment, ECF No. 106, is **DENIED**.

It is further **ORDERED** that Fiba's motion for summary judgment, ECF No. 108, is **DENIED**.

It is further **ORDERED** that the Scheduling Order be amended as follows:

Proposed Jury Instructions:	July 26, 2019
Final Motions in Limine:	August 13, 2019
Pretrial Disclosures:	September 3, 2019
Final Pretrial Conference:	September 10, 2019 at 3:00p.m.
Trial Date	September 24, 2019 at 8:30a.m.

Dated: May 21, 2019

s/Thomas L. Ludington
THOMAS L. LUDINGTON
United States District Judge